

THE CLAIMS

Claims 1-7, 12-18, and 27-30 are pending in the instant application. Claims 8-11 and 19-26 have been previously cancelled. The Applicant requests reconsideration of the claims in view of the following remarks.

Listing of claims:

1. (Previously Presented) A multi-mode wireless communication device, comprising:

a first baseband co-processor configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network;

a host baseband processor configured to execute a set of protocol stack operations of a second wireless communications protocol employed within a second wireless communications network and higher-level stack operations of said first wireless communications protocol;

a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network; and

one or both of said first baseband co-processor and said host baseband processor enabling switching between bearers utilizing said low-level stack operations and said set of protocol stack operations and maintaining bearer connections during said switching.

2. (Previously Presented) The device of claim 1, wherein said set of protocol stack operations comprises a complete set of protocol stack operations of said second wireless communications protocol.

3. (Previously Presented) The device of claim 1 comprising a second baseband processor in communication with said host baseband processor via said data communication channel, said second baseband processor being configured to execute low-level stack operations of said second wireless communications protocol.

4. (Previously Presented) The device of claim 3, wherein said set of protocol stack operations comprises higher-level protocol stack operations of said second wireless communications protocol.

5. (Previously Presented) The device of claim 1, wherein said low-level stack operations include physical layer functions and bearer-specific stack functions related to said first wireless communications protocol.

6. (Previously Presented) The device of claim 1, wherein said higher-level stack functions comprise stack functions common to said first and second wireless communication protocols.

7. (Previously Presented) The device of claim 1, wherein said host baseband processor is further configured to execute application-layer functions.

8. – 11. (Cancelled)

12. (Previously Presented) The device of claim 1, wherein said first wireless communications protocol comprises WCDMA and said second wireless communications protocol comprises GSM.

13. (Previously presented) A method performed in a wireless communication device disposed for communication with first and second wireless communications networks in accordance with first and second wireless communication protocols, respectively, said method comprising:

executing low-level stack operations of said first wireless communications protocol within a first baseband co-processor;

executing a set of protocol stack operations of a second wireless communications protocol and higher-level stack operations of said first wireless communications protocol within a host baseband processor;

establishing a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said wireless communication device from said first wireless communications network or sent by said wireless communication device through said first wireless communications network; and

switching between bearers utilizing said low-level stack operations and said set of protocol stack operations and maintaining bearer connections during said switching.

14. (Previously Presented) The method of claim 13, wherein said executing said set of protocol stack operations comprise executing a complete set of protocol stack operations of said second wireless communications protocol.

15. (Previously Presented) The method of claim 13 comprising executing low-level stack operations of said second wireless communications protocol within

a second baseband processor in communication with said host baseband processor via said data communication channel.

16. (Previously Presented) The method of claim 15, wherein said executing said set of protocol stack operations comprises executing higher-level protocol stack operations of said second wireless communications protocol.

17. (Previously Presented) The method of claim 13, wherein said executing said low-level stack operations comprises executing physical layer functions and bearer-specific stack functions related to said first wireless communications protocol.

18. (Previously Presented) The method of claim 17, wherein said executing higher-level stack functions comprises executing stack functions common to said first and second wireless communication protocols.

19. – 26. (Cancelled)

27. (Previously Presented) A multi-mode wireless communication device, comprising:

a first baseband co-processor configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network;

a host baseband processor configured to execute a set of protocol stack operations of a second wireless communications protocol employed within a second wireless communications network and higher-level stack operations of said first wireless communications protocol; and

a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network,

wherein said host baseband processor comprises:

a common stack functions module communicating to one or more application modules, said common stack functions module executing functions common to said first and second wireless communications protocols;

a first bearer-specific module for implementing bearer-specific stack functions related to said first wireless communications protocol;
and

a second buffer in communication with said first bearer-specific module and said common stack functions module; and
wherein said first baseband co-processor comprises:
a first physical layer module for implementing physical layer functions;
a first buffer in communication with said first physical layer module and said first bearer-specific module.

28. (Previously Presented) The device according to claim 27, wherein said host baseband processor comprises a common stack functions module and one or more application modules, said common stack functions module executing functions common to said first and second wireless communications protocols.

29. (Previously Presented) A multi-mode wireless communication device, comprising:

a first baseband co-processor configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network;

a host baseband processor configured to execute a set of protocol stack operations of a second wireless communications protocol employed within a

second wireless communications network and higher-level stack operations of said first wireless communications protocol;

a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network; and

one or both of said first baseband co-processor and said host baseband processor enabling switching between bearers utilizing said low-level stack operations and said set of protocol stack operations and maintaining bearer connections during said switching,

wherein said host baseband processor comprises:

a first bearer-specific module for implementing bearer-specific stack functions related to said first wireless communications protocol;
and

wherein said first baseband co-processor comprises:

a first physical layer module for implementing physical layer functions; and

a first buffer in communication with said first physical layer module and said first bearer-specific module.

30. (Previously Presented) A multi-mode wireless communication device, comprising:

a first baseband co-processor configured to execute low-level stack operations of a first wireless communications protocol employed within a first wireless communications network;

a host baseband processor configured to execute a set of protocol stack operations of a second wireless communications protocol employed within a second wireless communications network and higher-level stack operations of said first wireless communications protocol;

a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network; and

one or both of said first baseband co-processor and said host baseband processor enabling switching between bearers utilizing said low-level stack operations and said set of protocol stack operations and maintaining bearer connections during said switching,

wherein said host baseband processor comprises:

a first bearer-specific module for implementing bearer-specific stack functions related to said first wireless communications protocol; and

a second buffer in communication with said first bearer-specific module and a common stack functions module; and wherein said first baseband co-processor comprises:

a first physical layer module for implementing physical layer functions; and

a first buffer in communication with said first physical layer module and said first bearer-specific module from said host baseband processor via said data communication channel.